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s/ Maria C. Gasaway  
Maria C. Gasaway

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Snyder	:	Art Unit: 1771
Serial No.: 09/894,671	:	Primary Examiner: C. Pratt
Filed: June 27, 2001	:	Attorney Docket: 25049B
Title: HIGH PERFORMANCE KRAFT FACING FOR FIBERGLASS INSULATION	:	

**TRANSMITTAL OF APPELLANT'S BRIEF (37 CFR § 1.192)**

**Commissioner of Patents and Trademarks  
P.O. Box 1450  
Alexandria, VA 22313-1450**

**ATTENTION: Board of Patent Appeals and Interferences**

Sir:

Enclosed is an Appeal Brief (in triplicate) for the above-identified application.

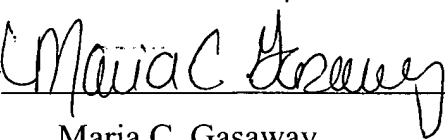
If any questions should arise with respect to the Appeal Brief, it is requested that the Examiner contact Appellant's agent at the number listed below.

Appellant authorizes that the fee (\$330) for filing the Appeal Brief be charged to Deposit Account No. 50-0568.

Appellant authorizes any additional fees required pertaining to the Appeal Brief be charged to Deposit Account No. 50-0568.

Respectfully submitted,

**OWENS-CORNING**

By \_\_\_\_\_

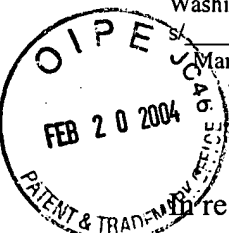
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February 17, 2004

Serial No. 09/894,671

25049B

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**Appeal No.**

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**Commissioner of Patents and Trademarks**

**P.O. Box 1450**

**Alexandria, VA 22313-1450**

**ATTENTION: Board of Patent Appeals and Interferences**

This brief is in furtherance of the Notice of Appeal filed on December 16, 2003

The fees required under § 1.17(f) and any required petition for extension of time for filing this brief and fees therefore are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF. **This brief is transmitted in triplicate (37 CFR §1.192(a)).**

This brief contains these items under the following headings and in the order set forth below (37 CFR §1.192(c)):

- (1) Real Party in Interest
- (2) Related Appeals and Interferences
- (3) Status of Claims
- (4) Status of Amendments
- (5) Summary of Invention

- (6) Issues
- (7) Grouping of Claims
- (8) The Examiner's Rationale
- (9) Argument: Rejections under 35 U.S.C. § 103(a)
- (10) Conclusions
- (11) Appendix of Claims Involved in the Appeal (Appendix A)

**(1) REAL PARTY IN INTEREST (37 CFR § 1.92(c)(1))**

The Real Party in Interest i.e., the Owner and Appellant at the time of the filing of this Brief is Owens-Corning Fiberglas Technology, Inc., with a license to Owens Corning.

**(2) RELATED APPEALS AND INTERFERENCES (37 CFR §1.92(c)(2))**

There are no related appeals and interferences which would directly effect or be directly effected by or have a bearing on the decision in this appeal.

**(3) STATUS OF CLAIMS (37 CFR §1.92(c)(3))**

**A. STATUS OF THE CLAIMS**

Claims 1-7 and 13-17 are pending in the application. Claims 8-12 have been cancelled. Claims 1-7 and 13-17 stand finally rejected under 35 U.S.C. 103(a) as being unpatentable over McBride (U.S. 5,318,644) or Appellant's Admitted Prior Art (AAPA) in view of Briggs (U.S. 4,366,203). Claims 1-7 and 13-17 stand finally rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (U.S. 6,191,057) and Berdan, II et al. (U.S. 6,128,884). Claims 1-7 and 13-17 are on appeal as set forth in Appendix A.

**(4) STATUS OF AMENDMENTS (37 CFR §1.192(c)(4))**

On October 16, 2003, Appellants filed a request for reconsideration to the final rejection of claims 1-7 and 13-17 and cancelled claims 8-12. In the Examiner's Advisory Action of November 20, 2003, the Examiner stated that the request for reconsideration was considered and entered but did not place the application in condition for allowance. A Notice of Appeal was filed on December 16, 2003.

**(5) SUMMARY OF INVENTION (37 CFR §1.192(c)(5))**

One embodiment of the Appellant's present invention is a flexible planar laminate comprising an external support layer of kraft paper to which is adhered a central vapor barrier layer of high density polyethylene (HDPE) or polypropylene, to which is adhered an internal adhesive layer of low density polyethylene (LDPE). The dependant claims recite a flexible planar laminate from 2 to 10 pounds, and more specifically 7 pounds, of HDPE and from 3 to 10 pounds, and more specifically 5 pounds, of LDPE per ream (3000 square feet) of kraft paper having a weight of 30 to 50 lbs/ft<sup>2</sup>. In the flexible planar laminate of the dependant claims, the softening point of the LDPE is from 25 to 125° F and more specifically from 25 to 75° F lower than the softening point of the HDPE. With a claimed polypropylene barrier layer, the softening point of the LDPE is claimed to be 25 to 150° F and more specifically from 25 to 75° F lower than the softening point of the polypropylene. The water vapor transmission rate for the laminate is claimed to be under about 1.0 g/h·m<sup>2</sup>.

Another embodiment of the present invention is a process for preparing a fiberglass insulation product. This process involves: (a) providing a layer of kraft paper, (b) coating the kraft paper layer with from 2 to 10 pounds of HDPE or of polypropylene per 3000 square feet of said paper to form an HDPE-kraft laminate, (c) coating the HDPE-kraft or PP-kraft laminate with from 3 to 10 pounds of LDPE per 3000 square feet of said HDPE-kraft or PP-kraft laminate to form an LDPE-HDPE (or PP)-kraft laminate, (d) adjusting the temperature of the LDPE-HDPE (or PP)-kraft laminate, e.g. with an infra-red heater, a microwave heater, or a rotating hot roll, so that the LDPE becomes tacky while the HDPE or PP remains solid, (e) providing a layer of fiberglass wool, and (f) contacting the LDPE layer of the LDPE-HDPE (or PP)-kraft laminate with the fiberglass wool layer with pressure and cooling to bond said LDPE-HDPE (or PP)-kraft laminate to said fiberglass wool layer to form a fiberglass insulation product. The water vapor transmission rate for the laminate is claimed to be under about 1.0 g/h·m<sup>2</sup>.

**(6) ISSUES (37 CFR §1.192(c)(6))**

The issue is whether claims 1-7 and 13-17 are unpatentable under 35 U.S.C. §103(a) over McBride (U.S. 5,318,644) or Appellant's Admitted Prior Art (AAPA) in view of Briggs (U.S. 4,366,203) and Patel et al. (U.S. 6,191,057) and Berdan, II et al. (U.S. 6,128,884).

**(7) GROUPING OF CLAIMS (37 CFR §1.192(c)(7))**

Claims 1-7 stand or fall together. Claims 13-17 stand or fall together.

**(8) EXAMINER'S RATIONALE**

The Examiner's rationale for rejecting claims 1-7 and 13-17 as being unpatentable over McBride (U.S. 5,318,644) or Appellant's Admitted Prior Art (AAPA) in view of Briggs (U.S. 4,366,203) is as follows:

The Examiner states that the Appellant's claimed water vapor transmission rate would be inherent in the combination of the above references because the combination teaches all of the elements of Appellant's invention and the water vapor transmission rates of a laminate are inherent in the materials used to create the laminate.

The Examiner further states that it would have been obvious to a person having ordinary skill in the art to reduce the water vapor transmission rate of the laminate. The Examiner states that it could easily be accomplished by simply increasing the coverage area and thickness of the adhesive layer.

The Examiner states that McBride teaches an insulation product comprising fiber glass wool. The Examiner states that the product of McBride comprises external layers of kraft paper and HDPE. The Examiner also states that McBride teaches the use of adhesive layers but it is silent with respect to the specific composition of the adhesive. The Examiner further states that Appellant discloses that insulation products comprise fiberglass wool, polyethylene film vapor barrier layers and kraft paper are known in the art.

The Examiner states that Briggs is concerned with the create of a multilayer insulation product comprising fiberglass. The Examiner states that Briggs teaches adhering various layers

together with LDPE. The Examiner states that it would have been obvious to a person having ordinary skill in the art to utilize the LDPE adhesive of Briggs in the laminate of McBride or AAPA.

The Examiner's rationale for rejecting claims 1-7 and 13-17 as being unpatentable over Patel and Berdan II, et al. is as follows:

The Examiner states that the property of the water vapor transmission rate would be inherent in both Patel and Berdan II, et al. because both teach all of the elements of Appellant's invention and the water vapor transmission rates of a laminate would be inherent in the materials used to create the invention.

The Examiner states the Patel and Berdan II, et al. are concerned with the creation of an insulation material comprising a vapor barrier layer of HDPE and an adhesive layer of LDPE. The Examiner states that Patel and Berdan II, et al. teach that kraft paper is commonly used in such insulation. The Examiner states that it would have been obvious to a person having ordinary skill in the art to utilize a kraft layer in the insulation of Patel or Berdan. The Examiner states that such a modification would have been motivated by the desire to improve the product integrity and handleability of said insulation.

**(8) ARGUMENT – The Section 103(a) Rejection of Claims 1-7 and 13-17 Is in Error**

**The Examiner Fails to Establish a Case of *Prima Facie* Obviousness**

Neither McBride, AAPA nor Briggs teach or suggest “a flexible planar laminate comprising a layer of kraft paper to which is adhered a vapor barrier layer...to which is adhered an adhesive layer of low melting point polymer...” as Appellant claims. The references fail to teach or suggest Appellant's claimed materials adhered together in the manner as Appellant has claimed and further having the claimed water vapor transmission rates.

McBride teaches an insulation assembly having exterior covers on opposite sides of the insulation. The exterior covers may be polyethylene, kraft paper or Mylar (cols. 4-5, lines 65-5). The exterior covers are sealed to the insulation assembly by heat sealing or by adhesives (col. 5, lines 5-9). AAPA teach a glass wool blanket having a kraft paper/polyethylene vapor barrier. On page 2 of the specification, Appellant's specifically point out that the conventional insulation

facing products, as outlined in AAPA, fail to consistently meet PERM (water vapor transmission) requirements. Appellant's claimed invention, meets PERM requirements as it has a water vapor transmission rate "under about  $1.0 \text{ g/h}\cdot\text{m}^2$ ".

Briggs teach a polyisocyanurate rigid foam panel which is faced with metal foil (aluminum foil). The surface of the metal foil is coated with vermiculite lamellae, in the form of a suspension or slurry, to provide fire resistant properties to the panel (col. 2, lines 52-61). The panel could optionally include kraft paper as an upper contact facing with several laydown facing sheets of vermiculite lamellae coated aluminum foil coated with low density polyethylene (col. 7, lines 16-31).

Appellant respectfully submits that neither of the cited references teach or suggest all of Appellant's claim limitations including, "...a layer of kraft paper to which is adhered a vapor barrier layer consisting essentially of high melting point polymer to which is adhered an adhesive layer of low melting point polymer wherein the water vapor transmission rate for said laminate is under about  $1.0 \text{ g/h}\cdot\text{m}^2$ ." As such, the criterion for establishing prima facie case of obviousness has not been met.

The Examiner states that it would have been obvious to a person having ordinary skill in the art to utilize a kraft layer in the insulation of Patel or Berdan II. The Examiner further states that such a modification would have been motivated by the desire to improve the product integrity and handleability of the insulation.

Neither Patel et al. nor Berdan, II et al. teach or suggest Appellant's claimed "a flexible planar laminate comprising a layer of kraft paper to which is adhered a vapor barrier layer...to which is adhered an adhesive layer of low melting point polymer wherein the water vapor transmission rate for said laminate is under about  $1.0 \text{ g/h}\cdot\text{m}^2$ ". Further, Both Patel et al. and Berdan, II et al. teach away from using kraft paper. The references fail to teach or suggest Appellant's claimed materials adhered together in the manner as Appellant has claimed and further having the claimed water vapor transmission rates.

Patel et al. teach away from using a kraft/asphalt facing as it is not flexible (col. 6, lines 61-63). Patel et al. teach an insulation product having a dual layer facing (kraft comprising a polymer film and a bonding layer (col. 6, lines 1-3) which provides flexibility to the insulation



product. Berdan II et al. teach an insulation product having a dual layer facing serving as a vapor layer. The facing of Berdan II includes a bonding layer of LDPE and a barrier layer of HDPE. Berdan II et al. teach that the facing is an improvement over asphalt/kraft-faced insulations as it provides improved flexibility (col. 7, lines 30-36). The references fail to teach or suggest Appellant's claimed materials adhered together in the manner as Appellant has claimed and further having the claimed water vapor transmission rates. Further, both Patel et al. and Berdan II, et al. teach away from using kraft paper as an insulation facing. As such, it would not have been obvious to one of ordinary skill to the art to utilize a kraft layer in the insulation of Patel et al. or Berdan II et al.

Accordingly, the combination of these references does not render Appellant's invention obvious, within the meaning of 35 U.S.C. § 103(a).

#### (10) CONCLUSIONS

For the foregoing reasons, Appellant believes that the Examiner's rejection of claims 1-7 and 13-17 was erroneous, and reversal of these rejections is respectfully requested.

Respectfully submitted,



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Date: February 17, 2004

**(11) APPENDIX A – CLAIMS INVOLVED IN THE APPEAL (37 CFR 1.192(c)(9))**

1. A flexible planar laminate comprising a layer of kraft paper to which is adhered a vapor barrier layer consisting essentially of high melting point polymer to which is adhered an adhesive layer of low melting point polymer, wherein the water vapor transmission rate for said laminate is under about  $1.0 \text{ g/h}\cdot\text{m}^2$ .
2. The flexible planar laminate of claim 1 wherein the high melting point polymer is high density polyethylene (HDPE) or of polypropylene.
3. The flexible planar laminate of claim 2 wherein the low melting point polymer is low density polyethylene (LDPE).
4. The flexible planar laminate of claim 3 which comprises from 2 to 10 pounds of HDPE and from 3 to 10 pounds of LDPE per 3000 square feet of kraft paper having a weight of 30 to 50 pounds per 3000 square feet.
5. The flexible planar laminate of claim 4 which comprises 7 pounds of HDPE and 5 pounds of LDPE per 3000 square feet of kraft paper.
6. The flexible planar laminate of claim 3 in which the barrier layer is HDPE and the softening point of the LDPE is from 25 to 125 F° lower than the softening point of the HDPE.
7. The flexible planar laminate of claim 3 in which the barrier layer is polypropylene and the softening point of the LDPE is from 25 to 75 F° lower than the softening point of the polypropylene.

13. A fiberglass insulation product comprising a layer of fiberglass wool and a flexible planar laminate comprising
- a) an external support layer of kraft paper;
  - b) a central vapor barrier layer of high melting point polymer adhered to said kraft paper; and
  - c) an internal adhesive layer of low melting point polymer adhered to said central vapor barrier layer;

wherein said layer of fiberglass wool is adhered to said internal adhesive layer; wherein the water vapor transmission rate for said laminate is under about  $1.0 \text{ g/h}\cdot\text{m}^2$ .

14. The fiberglass insulation product of claim 13 wherein the high melting point polymer is high density polyethylene (HDPE) or polypropylene.

15. The fiberglass insulation product of claim 14 wherein the low melting point polymer is low density polyethylene (LDPE).

16. The fiberglass insulation product of claim 15 in which the flexible planar laminate comprises from 2 to 10 pounds of HDPE and from 3 to 10 pounds of LDPE per 3000 square feet of kraft paper having a weight of 30 to 50 lbs/ft<sup>2</sup>.

17. The fiberglass insulation product of claim 14 in which the flexible planar laminate comprises 7 pounds of HDPE and 5 pounds of LDPE per 3000 square feet of kraft paper.



Serial No. 09/894,671

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Serial No.: 09/894,671 : Primary Examiner: C. Pratt  
Filed: June 27, 2001 : Attorney Docket: 25049B  
Title: HIGH PERFORMANCE KRAFT :  
FACING FOR FIBERGLASS :  
INSULATION :

**Appeal No.**

**APPELLANT'S BRIEF (37 CFR § 1.192)**

**Commissioner of Patents and Trademarks  
P.O. Box 1450  
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- (2) Related Appeals and Interferences
- (3) Status of Claims
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- (9) Argument: Rejections under 35 U.S.C. § 103(a)
- (10) Conclusions
- (11) Appendix of Claims Involved in the Appeal (Appendix A)

**(1) REAL PARTY IN INTEREST (37 CFR § 1.92(c)(1))**

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**(2) RELATED APPEALS AND INTERFERENCES (37 CFR §1.92(c)(2))**

There are no related appeals and interferences which would directly effect or be directly effected by or have a bearing on the decision in this appeal.

**(3) STATUS OF CLAIMS (37 CFR §1.92(c)(3))**

**A. STATUS OF THE CLAIMS**

Claims 1-7 and 13-17 are pending in the application. Claims 8-12 have been cancelled. Claims 1-7 and 13-17 stand finally rejected under 35 U.S.C. 103(a) as being unpatentable over McBride (U.S. 5,318,644) or Appellant's Admitted Prior Art (AAPA) in view of Briggs (U.S. 4,366,203). Claims 1-7 and 13-17 stand finally rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (U.S. 6,191,057) and Berdan, II et al. (U.S. 6,128,884). Claims 1-7 and 13-17 are on appeal as set forth in Appendix A.

**(4) STATUS OF AMENDMENTS (37 CFR §1.192(c)(4))**

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**(5) SUMMARY OF INVENTION (37 CFR §1.192(c)(5))**

One embodiment of the Appellant's present invention is a flexible planar laminate comprising an external support layer of kraft paper to which is adhered a central vapor barrier layer of high density polyethylene (HDPE) or polypropylene, to which is adhered an internal adhesive layer of low density polyethylene (LDPE). The dependant claims recite a flexible planar laminate from 2 to 10 pounds, and more specifically 7 pounds, of HDPE and from 3 to 10 pounds, and more specifically 5 pounds, of LDPE per ream (3000 square feet) of kraft paper having a weight of 30 to 50 lbs/ft<sup>2</sup>. In the flexible planar laminate of the dependant claims, the softening point of the LDPE is from 25 to 125° F and more specifically from 25 to 75° F lower than the softening point of the HDPE. With a claimed polypropylene barrier layer, the softening point of the LDPE is claimed to be 25 to 150° F and more specifically from 25 to 75° F lower than the softening point of the polypropylene. The water vapor transmission rate for the laminate is claimed to be under about 1.0 g/h·m<sup>2</sup>.

Another embodiment of the present invention is a process for preparing a fiberglass insulation product. This process involves: (a) providing a layer of kraft paper, (b) coating the kraft paper layer with from 2 to 10 pounds of HDPE or of polypropylene per 3000 square feet of said paper to form an HDPE-kraft laminate, (c) coating the HDPE-kraft or PP-kraft laminate with from 3 to 10 pounds of LDPE per 3000 square feet of said HDPE-kraft or PP-kraft laminate to form an LDPE-HDPE (or PP)-kraft laminate, (d) adjusting the temperature of the LDPE-HDPE (or PP)-kraft laminate, e.g. with an infra-red heater, a microwave heater, or a rotating hot roll, so that the LDPE becomes tacky while the HDPE or PP remains solid, (e) providing a layer of fiberglass wool, and (f) contacting the LDPE layer of the LDPE-HDPE (or PP)-kraft laminate with the fiberglass wool layer with pressure and cooling to bond said LDPE-HDPE (or PP)-kraft laminate to said fiberglass wool layer to form a fiberglass insulation product. The water vapor transmission rate for the laminate is claimed to be under about 1.0 g/h·m<sup>2</sup>.

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#### **(8) ARGUMENT – The Section 103(a) Rejection of Claims 1-7 and 13-17 Is in Error**

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Appellant respectfully submits that neither of the cited references teach or suggest all of Appellant's claim limitations including, "...a layer of kraft paper to which is adhered a vapor barrier layer consisting essentially of high melting point polymer to which is adhered an adhesive layer of low melting point polymer wherein the water vapor transmission rate for said laminate is under about  $1.0 \text{ g/h}\cdot\text{m}^2$ ." As such, the criterion for establishing prima facie case of obviousness has not been met.

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Neither Patel et al. nor Berdan, II et al. teach or suggest Appellant's claimed "a flexible planar laminate comprising a layer of kraft paper to which is adhered a vapor barrier layer...to which is adhered an adhesive layer of low melting point polymer wherein the water vapor transmission rate for said laminate is under about  $1.0 \text{ g/h}\cdot\text{m}^2$ ". Further, Both Patel et al. and Berdan, II et al. teach away from using kraft paper. The references fail to teach or suggest Appellant's claimed materials adhered together in the manner as Appellant has claimed and further having the claimed water vapor transmission rates.

Patel et al. teach away from using a kraft/asphalt facing as it is not flexible (col. 6, lines 61-63). Patel et al. teach an insulation product having a dual layer facing (kraft comprising a polymer film and a bonding layer (col. 6, lines 1-3) which provides flexibility to the insulation

product. Berdan II et al. teach an insulation product having a dual layer facing serving as a vapor layer. The facing of Berdan II includes a bonding layer of LDPE and a barrier layer of HDPE. Berdan II et al. teach that the facing is an improvement over asphalt/kraft-faced insulations as it provides improved flexibility (col. 7, lines 30-36). The references fail to teach or suggest Appellant's claimed materials adhered together in the manner as Appellant has claimed and further having the claimed water vapor transmission rates. Further, both Patel et al. and Berdan II, et al. teach away from using kraft paper as an insulation facing. As such, it would not have been obvious to one of ordinary skill to the art to utilize a kraft layer in the insulation of Patel et al. or Berdan II et al.

Accordingly, the combination of these references does not render Appellant's invention obvious, within the meaning of 35 U.S.C. § 103(a).

#### **(10) CONCLUSIONS**

For the foregoing reasons, Appellant believes that the Examiner's rejection of claims 1-7 and 13-17 was erroneous, and reversal of these rejections is respectfully requested.

Respectfully submitted,



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**(11) APPENDIX A – CLAIMS INVOLVED IN THE APPEAL (37 CFR 1.192(c)(9))**

1. A flexible planar laminate comprising a layer of kraft paper to which is adhered a vapor barrier layer consisting essentially of high melting point polymer to which is adhered an adhesive layer of low melting point polymer, wherein the water vapor transmission rate for said laminate is under about  $1.0 \text{ g/h}\cdot\text{m}^2$ .
2. The flexible planar laminate of claim 1 wherein the high melting point polymer is high density polyethylene (HDPE) or of polypropylene.
3. The flexible planar laminate of claim 2 wherein the low melting point polymer is low density polyethylene (LDPE).
4. The flexible planar laminate of claim 3 which comprises from 2 to 10 pounds of HDPE and from 3 to 10 pounds of LDPE per 3000 square feet of kraft paper having a weight of 30 to 50 pounds per 3000 square feet.
5. The flexible planar laminate of claim 4 which comprises 7 pounds of HDPE and 5 pounds of LDPE per 3000 square feet of kraft paper.
6. The flexible planar laminate of claim 3 in which the barrier layer is HDPE and the softening point of the LDPE is from 25 to 125 F° lower than the softening point of the HDPE.
7. The flexible planar laminate of claim 3 in which the barrier layer is polypropylene and the softening point of the LDPE is from 25 to 75 F° lower than the softening point of the polypropylene.

13. A fiberglass insulation product comprising a layer of fiberglass wool and a flexible planar laminate comprising
- a) an external support layer of kraft paper;
  - b) a central vapor barrier layer of high melting point polymer adhered to said kraft paper; and
  - c) an internal adhesive layer of low melting point polymer adhered to said central vapor barrier layer;
- wherein said layer of fiberglass wool is adhered to said internal adhesive layer; wherein the water vapor transmission rate for said laminate is under about  $1.0 \text{ g/h}\cdot\text{m}^2$ .
14. The fiberglass insulation product of claim 13 wherein the high melting point polymer is high density polyethylene (HDPE) or polypropylene.
15. The fiberglass insulation product of claim 14 wherein the low melting point polymer is low density polyethylene (LDPE).
16. The fiberglass insulation product of claim 15 in which the flexible planar laminate comprises from 2 to 10 pounds of HDPE and from 3 to 10 pounds of LDPE per 3000 square feet of kraft paper having a weight of 30 to 50 lbs/ft<sup>2</sup>.
17. The fiberglass insulation product of claim 14 in which the flexible planar laminate comprises 7 pounds of HDPE and 5 pounds of LDPE per 3000 square feet of kraft paper.